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Attorneys for Plaintiff
OptraHealth, Inc.

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA**

OPTRAHEALTH, INC.,

Case No.: 5:22-cv-3002

Plaintiff,

VS.

INVITAE CORPORATION,

Defendant.

**COMPLAINT FOR PATENT
INFRINGEMENT; AND**

DEMAND FOR JURY TRIAL

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff OptraHealth Inc. (OptraHealth), by and through its attorneys, files this Complaint for Patent Infringement and Demand for Jury Trial against Invitae Corporation (Invitae) and alleges the following:

THE PARTIES

1. Plaintiff OptraHealth is a corporation organized under the laws of the State of California with a place of business at 1798 Technology Drive, Suite 258, San Jose, CA 95110.

2. Defendant Invitae is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business at 1400 16th Street, San Francisco, CA 94103.

JURISDICTION AND VENUE

3. This action arises under the Patent Laws of the United States, 35 U.S.C. §§ 1 *et seq.*

4. This Court has federal question jurisdiction under 28 U.S.C. §§ 1331 and 1338.

5. This Court has personal jurisdiction over Defendants. Defendants conduct business and have committed acts of patent infringement and have induced acts of patent infringement by others in this district and have contributed to patent infringement by others in this district, the State of California, and elsewhere in the United States.

6. Venue is proper in this Court under 28 U.S.C. §§ 1391(b), (c) and 1400(b) in that this is the judicial district in which defendants have committed acts of infringement and have regular and established places of business.

BACKGROUND FACTS

7. OptraHealth was founded in 2017 to provide patient engagement and education services through its technology platform to the healthcare and life sciences industry. OptraHealth is a pioneer in the field, providing clients with technologies and solutions that harness the power of artificial intelligence for analyzing healthcare results and facilitating interrogations of these reports through an expert system.

8. As a pioneer in the field, OptraHealth developed a conversational digital genetic assistant for informed genetic education and patient engagement. OptraHealth has collaborations and partnerships with major companies and institutions across the globe including publicly listed companies, well renowned research institutions, genetic testing

1 laboratories and health systems. OptraHealth builds and sells software including the patented
2 technologies.

3 9. On or around 2017, OptraHealth invented specific methods whereby health reports are
4 retrieved through a machine-assisted interrogation process consisting of a personal assistance
5 device, a reporting system, and knowledge-graphing system, and a query-interrogation system.
6 At the time of the invention, retrieving and providing accurate results of health reports was
7 time consuming and inefficient. OptraHealth's innovations address these and other issues,
8 providing concrete technological improvements, including applying machine-learning to the
9 task to automate the process, using a personal assistance device to provide an interface for a
10 query-interrogation system, and applying a knowledge-graphing system to provide the accurate
11 results to the user. OptraHealth's innovative process frees up physician and other medical
12 professional time and attention to focus on areas that need the medical attention.

13 10. Existing medical software at the time of the invention of U.S. Patent No. 10,754,882
14 (the '882 Patent) provided static queries to data using boolean and arithmetic type operators
15 that do not understand the underlying semantics of the data. It is well known that disease
16 incidence can be reduced if early signs are identified, with such identification being limited by
17 a lack of patient-driven self-assessment tools and access to their personalized health
18 information.

19 11. In contrast, the patented method adds a layer of intelligence to health data and thereby
20 provides an improved health care computer system. The patented method converts medical
21 data into knowledge from any medical document using artificial intelligence language trained
22 models that can identify entities and their hidden relationships within the data using advanced
23

1 technologies such as natural language processing, ontologies, and context-sensitive mapping to
2 identify meaningful association and hidden knowledge in medical data. Based on this the
3 patent method generates formal semantics that allows both people and computers to process
4 data efficiently and unambiguously. The inference model generated is a collection of
5 interlinked descriptions of concepts, entities, relationships, and events where descriptions
6 contribute to one another, where each entity represents part of the description of the entities
7 related to it. Diverse data is connected and described by semantic metadata according to the
8 knowledge model.

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10 12. Accordingly, OptraHealth's patented method improves existing software applications
11 allowing users (including patients, providers, or any healthcare stakeholders) to obtain
12 contextually accurate insights from any medical data based on the semantics of their queries
13 mapped to the generated underlying semantic model. OptraHealth's patented method has
14 evolved the entire field of medicine that relies heavily on evidences generated from medical
15 data. Medical informatics solutions can execute any type of information retrieval process thus
16 bringing new life to medical data and thereby allowing healthcare stakeholders to ask very
17 granular specific questions. Novel insights are generated and, when applied appropriately, are
18 largely beneficial to healthcare systems.

19
20 13. During the COVID-19 pandemic of 2019, OptraHealth's innovative process provided
21 multiple benefits including expanding access to care, reducing disease exposure for staff and
22 patients, preserving scarce supplies of personal protective equipment, and reducing patient
23 demand on facilities.

1 14. The machine-learning and artificial-intelligence techniques embodied in the innovative
2 process allow for automating clinical workflows and further empowering providers and
3 patients. Additionally, doctors are provided with the capability to make real-time, data-driven
4 rich choices that lead to generating better patient experiences and improved health outcomes.
5

6 15. On August 25, 2020, OptraHealth was granted the ‘882 Patent claiming technologies
7 for retrieving information from healthcare reports using a personal assistance device,
8 developed by its co-founders. A true and correct copy of the ‘882 Patent is attached as Exhibit
9 1.

INVITAE AND ITS GIA CHATBOT PRODUCT

12 16. Defendant makes, uses, sells, offers for sale, and/or imports into the United States and
13 this District products and services that utilize the Gia Chatbot (“Accused Product” or “Accused
14 Instrumentality”), available at www.invitae.com/en/providers/gia-chatbot, last accessed on
15 11/9/2021. A true and correct copy of the web page is attached as Exhibit 2.

16 17. Defendant’s Gia Chatbot includes a “Genetic Information Assistant” or personal
17 assistance device that enables a customer to chat with the Gia Chatbot and review the results of
18 genetic testing results.
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1 https://www.invitae.com/en/providers/gia-chatbot

2 INVITAE

3 Individuals Providers Search Sign in Order now

4 questions, or facilitate an appointment with an Invitae genetic counselor

5 questions, or facilitate an appointment with an Invitae genetic counselor

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9 Results delivery without sacrificing quality interactions

10 Through an interactive chatbot, Gia can walk your patients through their genetic test results or schedule them for a call with an Invitae genetic counselor.

11 In the [Invitae portal](#), you can select the types of results Gia should help release to your patients.

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15 Patients love working with Gia

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The screenshot shows a mobile-style chat interface. A patient message at the top says, "To refresh your memory, you had testing for genes that are associated with an increased risk of developing certain cancers." A Gia response follows: "I'm ready". The patient then asks, "Your results are negative." Gia replies, "Ok, Gia". The patient continues, "In other words, the test did not identify any genetic variants associated with an increased risk of developing cancer." Gia responds with a "Tell me more" button. Below the chat, a summary states, "A negative genetic test result is reassuring, but there are a few limitations to be aware of." A timestamp at the bottom left of the screen shows "1:18". To the right of the chat, a large green graphic titled "Deliver the results..." lists a bullet point: "Gia will provide a summary of the results via the chat".

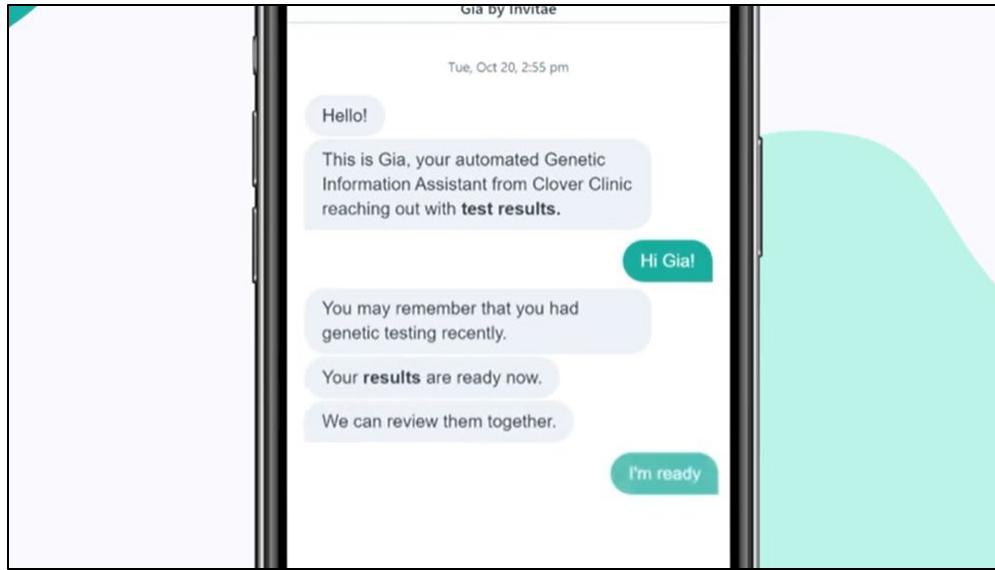


Exhibit 2 at pages 3-4.

**FIRST CAUSE OF ACTION
PATENT INFRINGEMENT OF U.S. PATENT NO. 10,754,882**

18. Plaintiff repeats, re-alleges, and incorporates by reference as though fully set forth herein, the allegations contained in all preceding paragraphs of this Complaint.

19. On August 25, 2020, the '882 Patent was duly and legally issued by the United States Patent and Trademark Office under the title "Method of Retrieving Information from a Health Report Through a Machine Assisted Interrogation Process." The '882 Patent is referred to as the "Asserted Patent."

20. OptraHealth is the assignee and owner of the right, title, and interest in and to the '882 Patent, with the rights to assert all causes of action arising under the '882 Patent and right to collect any remedies for infringement of it. OptraHealth is the sole owner of the '882 Patent, and has been the sole owner since issuance.

21. On information and belief, Defendant has and continues to directly infringe either literally or under the doctrine of equivalents, or both, or indirectly infringe at least Claims 1

1 and 3 by selling, offering to sell, making, using, providing, causing to be used, instructing,
2 directing, and/or requiring others to perform all or some of the steps of the method claims,
3 either literally or under the doctrine of equivalents. Defendant directly or indirectly infringes,
4 literally or under the doctrine of equivalents through the infringing genetic testing chatbot,
5 including the Accused Product such as the one shown here at
6 www.invitae.com/en/providers/gia-chatbot. See Exhibit 2.

7 22. On information and belief, the Accused Product performs methods for (A) providing a
8 personal assistance device, wherein the personal assistance device is communicably coupled
9 with a reporting system; (B) providing a reporting system, wherein the reporting system
10 comprises a plurality of health reports and a query-interrogation system; (C) receiving a health
11 report-related query through the personal assistance device, wherein the health report-related
12 query corresponds to a specific health report from the plurality of health reports; (D)
13 forwarding the health report-related query to the reporting system through the personal
14 assistance device; (E) selecting the specific health report from the plurality of health reports
15 through the query-interrogation system; (F) compiling a corresponding knowledge corpus for
16 the specific health report through a knowledge-graphing system, wherein the corresponding
17 knowledge corpus includes a query-related knowledge graph and a report-related knowledge
18 graph; (G) extracting a list of query-related information from the corresponding knowledge
19 corpus of the specific health report by comparing and associating the query-related knowledge
20 graph with the report-related knowledge graph through the knowledge-graphing system; (H)
21 forwarding the list of query-related information from the reporting system to the personal
22 assistance device; (I) converting the list of query-related information to an output content file
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1 through the query-interrogation system; and (J) outputting the output content file through the
 2 personal assistance device.

3 23. On information and belief, on or about February 23, 2021, Invitae posted a press release
 4 to its website announcing the new capabilities of its Gia chatbot to include “telemedicine-
 5 friendly conversation through receiving and understanding genetic test results...” The website
 6 is found at <https://ir.invitae.com/news-and-events/press-releases/press-release-details/2021/Invitae-expands-capabilities-of-its-advanced-clinical-chatbot-Gia-enhancing-telemedicine-support-for-patients-and-clinicians/default.aspx>, accessed on May 16, 2022. A
 7 true and correct copy of a screen capture is attached as Exhibit 3. The innovation is included in
 8 the patented OptraHealth method and disclosed several years prior in the original patent
 9 application filings.

10 24. As a non-limiting example, set forth below is a claim chart with a description of
 11 Defendant’s infringement of claims 1 and 3 of the ‘882 Patent by the Accused Instrumentality.
 12

Claim 1 of the ‘882 Patent	Where found on the Accused Instrumentality
A method of retrieving information from a health report through a machine assisted interrogation process comprises the steps of:	The Gia Chatbot is an automated genetic information assistant that returns genetic test results enabling customers to chat and review test results. (Exhibit 2, page 1).
(A) providing a personal assistance device, wherein the personal assistance device is communicably coupled with a reporting system;	“A HIPAA-compliant clinical chatbot, Gia facilitates virtual conversations with patients, including intake of family history and automatic delivery of results” reads on element (A) providing a personal assistance device, wherein the personal assistance

	device is communicably coupled with a reporting system. (Exhibit 2, page 1).
(B) providing a reporting system, wherein the reporting system comprises a plurality of health reports and a query-interrogation system;	“You’ll receive your patient’s results and can follow up with them directly. Or you can choose for Gia to release results automatically, provide education, and facilitate an appointment with an Invitae genetic counselor when appropriate” reads on element (B) providing a reporting system, wherein the reporting system comprises a plurality of health reports and a query-interrogation system. (Exhibit 2, page 1).
(C) receiving a health report-related query through the personal assistance device, wherein the health report-related query corresponds to a specific health report from the plurality of health reports;	“Through an interactive chatbot, Gia can walk your patients through their genetic test results or schedule them for a call with an Invitae genetic counselor” reads on element (C) receiving a health report-related query through the personal assistance device, wherein the health report-related query corresponds to a specific health report from the plurality of health reports. (Exhibit 2, page 2).
(D) forwarding the health report-related query to the reporting system through the personal assistance device;	Gia forwards queries to reporting systems (servers and processors run by Invitae) via mobile devices, with such functionality reading on element (D) forwarding the health report-related query to the reporting system through the personal assistance device. (Exhibit 2, page 2).
(E) selecting the specific health report from the plurality of health reports through the query-interrogation system;	Invitae video shows patient selecting to view test results and “your patient will be invited to chat with Gia.” Further, video screens show Gia reporting “Your results are negative.” This reads on element (E) selecting the specific health report from the

	plurality of health reports through the query-interrogation system. (Exhibit 2, page 2).
(F) compiling a corresponding knowledge corpus for the specific health report through a knowledge-graphing system, wherein the corresponding knowledge corpus includes a query-related knowledge graph and a report-related knowledge graph;	“Automatically return results, answer questions, or facilitate an appointment with an Invitae genetic counselor” reads on element (F) compiling a corresponding knowledge corpus for the specific health report through a knowledge-graphing system, wherein the corresponding knowledge corpus includes a query-related knowledge graph and a report-related knowledge graph. (Exhibit 2, page 2).
(G) extracting a list of query-related information from the corresponding knowledge corpus of the specific health report by comparing and associating the query-related knowledge graph with the report-related knowledge graph through the knowledge-graphing system;	Gia delivers results that are specific to the health reports based on the query (or user input) typed into the user’s mobile device. This reads on (G) extracting a list of query-related information from the corresponding knowledge corpus of the specific health report by comparing and associating the query-related knowledge graph with the report-related knowledge graph through the knowledge-graphing system. (Exhibit 2, page 2).
(H) forwarding the list of query-related information from the reporting system to the personal assistance device;	Gia’s responses and results are provided through display output on the user’s mobile device; this feature implies that Invitae forwards a list of query-related information from Invitae’s servers to the patient’s mobile device. This reads on (H) forwarding the list of query-related information from the reporting system to the personal assistance device. (Exhibit 2, page 2).
(I) converting the list of query-related information to an output content file through the query-interrogation system; and	Gia’s responses and results are provided through display output on the user’s mobile device, which requires an output content file either on Invitae’s server or on the user’s

	mobile device. This reads on (I) converting the list of query-related information to an output content file through the query-interrogation system. (Exhibit 2, page 2).
(J) outputting the output content file through the personal assistance device.	Gia's responses and results are shown displayed on the user's mobile device screen. This reads on (J) outputting the output content file through the personal assistance device. (Exhibit 2, page 2).
Claim 3 of the '882 Patent	
The method of retrieving information from a health report through a machine assisted interrogation process as claimed in claim 1 further comprises the steps of: wherein the personal assistance device is a graphical user interface; and displaying the output content file through the graphical user interface.	Gia Chatbot is an automated personal genetic assistant with a graphic user interface (GUI) where the results and output are displayed on the GUI of the Gia Chatbot. (Exhibit 2, page 2).

25. On information and belief, the Accused Instrumentality has been used to infringe and continue to directly infringe or indirectly infringe at least claims 1 and 3 of the '882 Patent during the pendency of the '882 Patent.

26. Since at least August 30, 2021, Invitae has had actual notice that it is directly infringing and/or indirectly infringing the '882 Patent.

1 27. On information and belief, the Accused Instrumentality is used, marketed, provided to,
2 and/or used by or for each of Defendant's partners, clients, customers, and/or end users in this
3 District.

4 28. On information and belief, since at least August 30, 2021, Invitae has induced and
5 continues to induce others to infringe at least claims 1 and 3 of the '882 Patent under 35 U.S.C.
6 § 271(b) with specific intent or willful blindness, by, among other things, actively aiding and
7 abetting others to infringe, including, but not limited to, Invitae's partners or customers, whose
8 use of the Accused Instrumentality constitutes direct infringement of at least claims 1 and 3 of
9 the '882 Patent.

10 29. In particular, Invitae's actions that aid and abet the infringement by others, such as their
11 partners and customers, by distributing the Accused Instrumentality and providing instructions,
12 materials and/or services related to the Accused Instrumentality. On information and belief,
13 Invitae has engaged in such actions with specific intent to cause infringement or with willful
14 blindness to the resulting infringement, because Invitae has had actual knowledge of the '882
15 Patent and that its acts were inducing infringement of the '882 Patent since at least August 30,
16 2021.

17 30. OptraHealth notified Invitae of Plaintiff's '882 Patent and Defendant's infringement of
18 the patent via a written letter dated August 30, 2021.

19 31. On information and belief, Invitae's infringement has been and continues to be willful.

20 32. Plaintiff has been harmed by Invitae's infringing activities.

21 33. As a result of Defendant's unlawful activities, OptraHealth has suffered and will continue
22 to suffer irreparable harm for which there is no adequate remedy at law. OptraHealth and Invitae

1 both compete in the enterprise chatbot software space, as described for example in paragraphs 7-
2 8 above. OptraHealth is actively engaged with business partners and clients in delivering
3 innovative solutions using the patented technology. Defendant's continued infringement of the
4 Asserted Patent causes harm to OptraHealth in the form of price erosion, loss of goodwill,
5 damage to reputation, loss of business opportunities, inadequacy of money damages, and direct
6 and indirect competition. Monetary damages are insufficient to compensate OptraHealth for
7 these harms. Accordingly, OptraHealth is entitled to preliminary and/or permanent injunctive
8 relief.

11

12 **PRAYER FOR RELIEF**

13 WHEREFORE, Plaintiff OptraHealth prays for relief as follows:

14

15 1. For an Order enjoining Defendant, their officers, agents, employees, and those acting in
concert or conspiracy with them, temporarily during the pendency of this action and
16 permanently thereafter from infringing, or inducing infringement by others, of the '882 Patent;
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18 2. An award of damages to be paid by Invitae adequate to compensate Plaintiff for
Invitae's past infringement of the Asserted Patent, and any continuing or future infringement
20 through the date such judgment is entered, including interest, costs, expenses and an
21 accounting of all infringing acts including, but not limited to, those acts not presented at trial;
22

23 3. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of
Plaintiff's reasonable attorneys' fees;

24

25 4. For other such relief as the court deems just and proper.

26 **JURY DEMAND**

27 Plaintiff demands a trial by jury on all issues triable as such.

1
2 Dated: May 20, 2022

Respectfully Submitted,

ZHEN LAW FIRM

3
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